

Marine Department.

The Canadian Pacific Railway's New Trans-Pacific Steamships.

The first of the two steamships which are being built as additions to the C.P.R. Co.'s trans-Pacific fleet, the *Empress of Russia*, was launched at Glasgow, Scotland, Aug. 28, the christening being performed by Mrs. H. W. Beauchlerk, of Montreal, eldest daughter of Sir Thos. Shaughnessy, the C.P.R. Co. being represented by G. McL. Brown, European Manager, in the unavoidable absence of A. Piers, Manager of Steamships, who was in Canada at the time. The second vessel, the *Empress of Asia*, will probably be launched in October.

These vessels will connect with the C.P.R.'s western terminus at Vancouver, and will steam direct to Yokohama, thence to Kobe and Nagasaki, where bunkers will be replenished for the round trip to Shanghai, Hong Kong, and back. Coal will again be shipped at Nagasaki for the return trip via Kobe and Yokohama to Vancouver. This programme involves very large radius of action, the distance between Vancouver and Nagasaki being over 5,000 nautical miles. The problem of carrying sufficient coal for a high rate of speed for so long a distance, together with adequate allowances of space and weight of cargo, passengers, stores and fresh water, is a serious one, especially in view of the decision to increase the sea speed from the 16 knots of the present services to 18 knots for the new vessels. The present trans-Pacific traffic was until recently carried on by the three screw vessels, *Empress of China*, *Empress of India* and *Empress of Japan*, each 450 ft. long and of about 6,000 tons gross register and built in 1891. The *Empress of China* was wrecked some few months ago, leaving only the two other vessels on the route.

These two new vessels, which will be ready to go into service early next summer, are very much larger than any of the present fleet, being 590 ft. long, 68 ft. beam, and 46 ft. deep, with about 15,000 gross tonnage. The turbine system of propulsion has been adopted by the C.P.R. for the first time, in these vessels which are to be propelled by four screws by four sets of turbines, and will have an average speed of 18 knots an hour. They will embody all the latest improvements, both for the safety and comfort of passengers. On a load draught of 29 ft. they will carry ample coal for the trip from Vancouver to Nagasaki, together with about 3,000 tons of cargo deadweight, and 1,500 tons of passengers, baggage, stores and fresh water.

In the construction of these vessels a radical departure from the current structure has been made in building them with cruiser sterns and the rudders entirely underhung. This form of stern, besides giving the vessels a very distinctive appearance, increases the effect of length of water line, thereby assisting propulsion, and also adds considerably to the available deck space at the after end. They will have five decks and in addition a long combined forecastle and bridge deck. Above the bridge deck will be located the principal first class public rooms, with the officers' quarters and navigating bridge overhead. In the dining saloon tables will be arranged to suit the demands of various passengers. Very small tables will be provided to accommodate two and four persons and larger ones for parties of six will be arranged in alcoves, while there will be still larger tables for other parties.

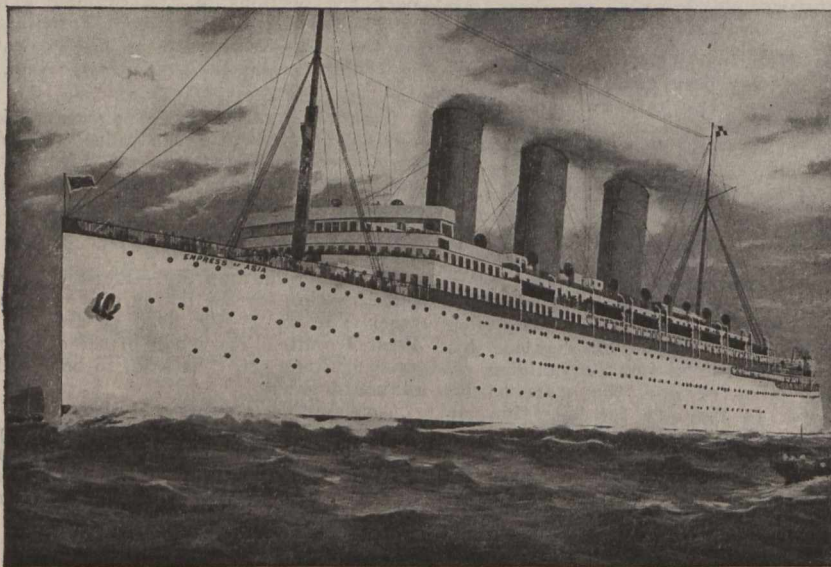
Accommodation will be provided for 200 first class, 100 second class and 800 third

class passengers, the two latter classes being for Asiatics. A number of single as well as double berth rooms will be provided so that the growing class of passengers who desire privacy can be taken care of. There will also be a number of suites consisting of bed room, sitting room and bath room. Besides the usual spacious dining saloon, lounge, cafe, library and writing room, a large gymnasium will be provided on the upper deck. It is to be fitted up with a large variety of exercising machines. Another feature adopted for the first time will be the laundry, which will be found of great convenience, especially in the hot weather on the Chinese coast.

The hold, orlop and lower decks beyond the machinery spaces will be arranged to carry general cargo. On the main deck forward the ship's mail room will be fitted the full breadth of the ship, and spaces for portable steerage or cargo. Amidships on this deck will be stowed the ship's stores.

The vessels will have a double bottom, orlop, lower, main, upper and shelter decks. Above the latter there is to be a long, combined forecastle and bridge, the bridge deck gating bridge over. There will be two pole

and cold chambers; abaft this will be accommodation for stewards and firemen. Between the firemen's quarters and the stern, provision will be made for carrying valuable cargoes of silk. Five hundred Asiatic steerage, in suitably divided compartments, large airing and dining accommodation, ample cooking and pantry space, and commodious wash places will be arranged for on the upper deck aft and amidships on the port side. On the starboard side aft of amidships staterooms for four persons will be fitted up for second class passengers. Forward of these on the same side will be a number of rooms for first class passengers. The upper deck forward will be taken for the accommodation of seamen and petty officers. On the shelter deck just forward of midships will be the first class reception room and cafe, 44 by 64 ft., with large embarking gangways on either side of the ship. Access to all the first class accommodation and public rooms will be gained from this reception room. Immediately forward on this deck will be large staterooms for two and three persons. Adjoining the cafe on the aft side will be the main saloon, 74 by 64 ft., lighted from



Canadian Pacific Ry. Trans-Pacific s.s. *Empress of Asia*.

being extended to the stern on side stanchions. Above the bridge deck will be a promenade deck about 350 ft. long on which will be the principal first class public rooms, with the officers' quarters and navigators and three funnels, straight stem, and as before mentioned, cruiser stern. In order to secure the safety of the vessels in the unlikely event of collision or grounding, the hulls are to be sub-divided by numerous watertight bulkheads, closely spaced in accordance with the recommendations of the bulkheads committee, in such a manner that even should any two adjacent compartments be simultaneously laid open to the sea, the weather deck would still be about 18 ft. above water. In addition, the usual complement of lifeboats and lifebelts will be carried, and there will be an installation of wireless telegraphy. The vessels are being constructed under the supervision of Lloyd's Register Society and will be classed by them 100 A1, three deck and shelter deck, with freeboard restricted to conform to the bulkhead spacing.

the sides from a number of beautifully designed windows nearly 5 ft. wide, and from above by a large well, 26 by 16 ft. The tables will be arranged to suit the demands of various passengers, from small ones for two and four persons to semiprivate tables for six arranged in alcoves, and larger tables for larger parties. In the central part of this deck will be the main kitchen, the pantries, cold larders, bakery, etc., equipped with all the latest hygienic and labor saving devices necessary for effectively serving the first and second class passengers. To minimize the running to and fro a number of electric lifts will be erected between the main kitchens and the various stores, and the number of 'b deck' pantries will be installed on the bridge and promenade decks above. Aft the galley and adjoining the turbine hatch, within easy reach of the promenade on the shelter deck will be the engineers' quarters, so arranged as to give the maximum comfort to the engine room staff in hot weather. Within easy reach of their cabins on the upper deck, and leading